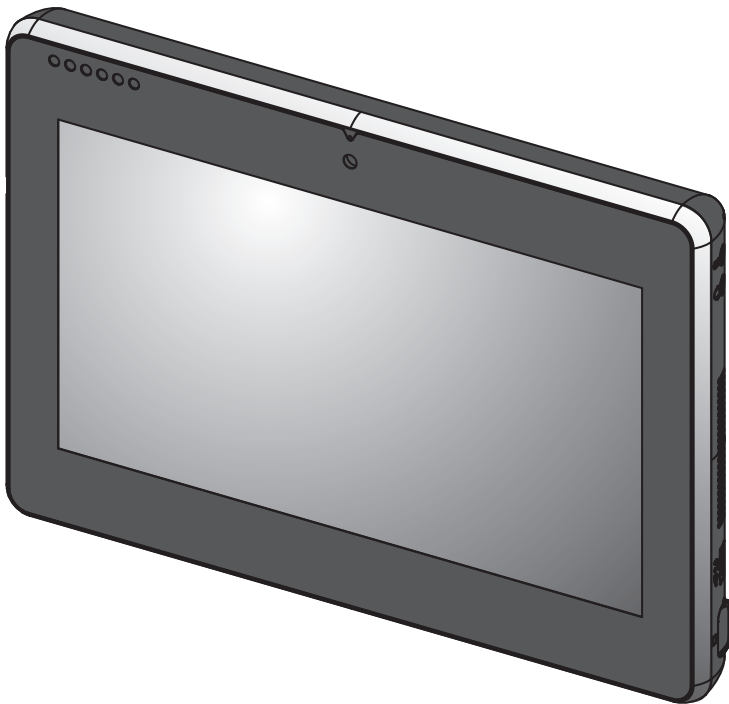


EM-200
User Manual



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Disclaimer

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. The manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademark recognition

All product names used in this manual are the properties of their respective owners and are acknowledged.

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.



WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Declaration of conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

This device may not cause harmful interference, and

This device must accept any interference received, including interference that may cause undesired operation.

About this manual

This manual is intended for system administrators who are familiar with setting up a new system and installing an operating system.

The manual consists of the following sections:

Chapter 1 Getting Started:	This section covers unpacking and checking the package contents, identifying components, installing the battery pack, charging the battery and powering on.
Chapter 2 BIOS Setup Utility:	The BIOS chapter provides information on navigating and changing settings in the BIOS Setup Utility.
Chapter 3 Upgrading Components:	This section provides information on upgrading components.
Appendix:	The appendix covers troubleshooting, information on having the EM-200 serviced, and technical specifications.

Safety information

Before installing and using the EM-200, take note of the following precautions:

- Read all instructions carefully.
- SAR compliance for body-worn operations is restricted which provide at least 2 cm separation between the device and the user's body
- Do not place the unit on an unstable surface, cart, or stand.
- Do not block the slots and opening on the unit, which are provided for ventilation.
- Do not push objects in the ventilation slots as they may touch high voltage components and result in shock and damage to the components.
- Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.
- Follow all warnings and cautions in this manual and on the unit case.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- Never throw the battery into a fire or put it near a fire.



WARNING

Warning! Batteries may explode if not handled properly. Do not disassemble or dispose of them in fire. Keep them away from children. Follow local regulations when disposing of used batteries.



警告

不正確地更換電池會有爆炸的危險。僅可更換為廠商建議的相同電池或相同型式電池。請依據廠商說明書棄置電池。



注意

用错误型号电池更换会有爆炸危险务必按照说明处置用完的电池。

Revision history

Version 1.0, August 2009

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CHAPTER 1 GETTING STARTED

This chapter describes the procedures from unpacking the EM-200, to powering it on. The following topics are described.

- Unpacking the machine on page 1
- Checking the package contents on page 2
- Identifying components on page 3
- Installing the battery pack on page 8
- Charging the battery pack on page 9
- “Powering on” on page 10

Unpacking the machine

The machine and cable accessories are packed in a cardboard carton with foam padding for protection during shipping.

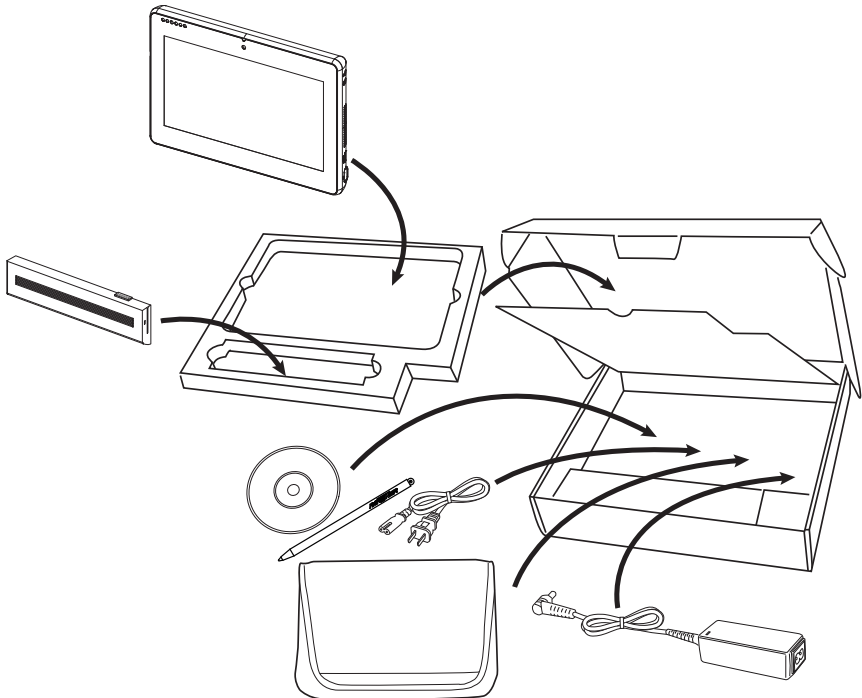
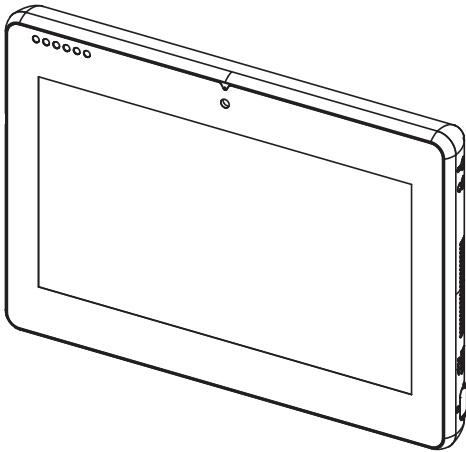


Figure 1.1 Unpacking the machine

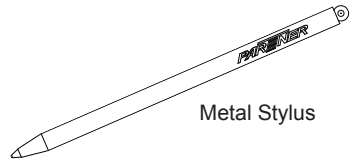
Carefully unpack the machine and keep the packing materials. If you need to ship it in the future, repack it as shown in Figure 1.1.

Checking the package contents

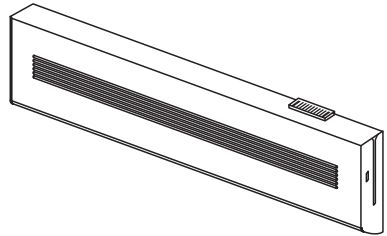
After you unpack the device, check that the following items are included.



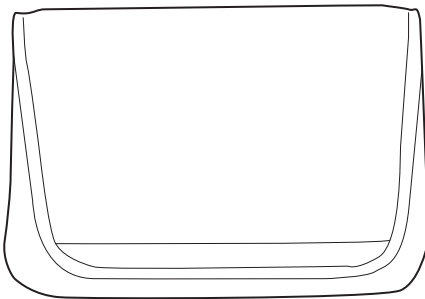
EM-200



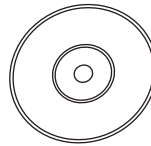
Metal Stylus



Battery



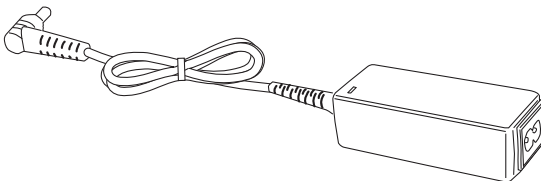
Protection pack



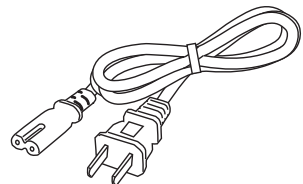
Driver CD with drivers and the user manual PDF file.



Quick Start Guide



AC adapter



Power cord

If any item is missing or appears damaged, contact your dealer immediately.

Identifying components

This section describes the parts and connectors on the machine.

Front view

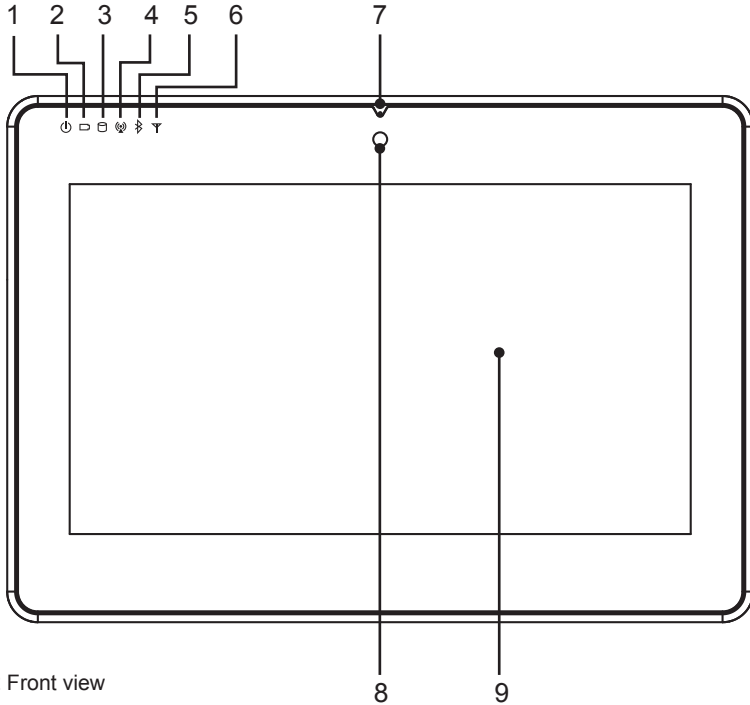


Figure 1.2 Front view

Component	Description
1	Power indicator
2	Battery charging indicator
3	HDD status indicator
4	WiFi On/ Off indicator
5	Bluetooth On/ Off indicator
6	3.5G LAN On/Off indicator (optional)
7	Built-in Microphone
8	Camera (optional)
9	10.1-inch touch panel

Left view

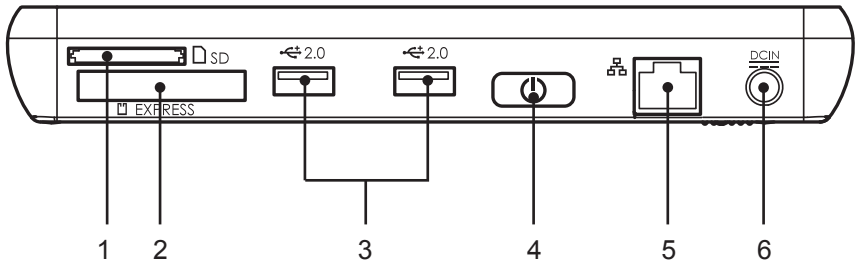


Figure 1.3 Left view

Component	Description
1	5-in-1 media card slot
2	Express card 34 slot
3	USB port
4	Power button
5	RJ45 LAN jack
6	DC IN

Right view

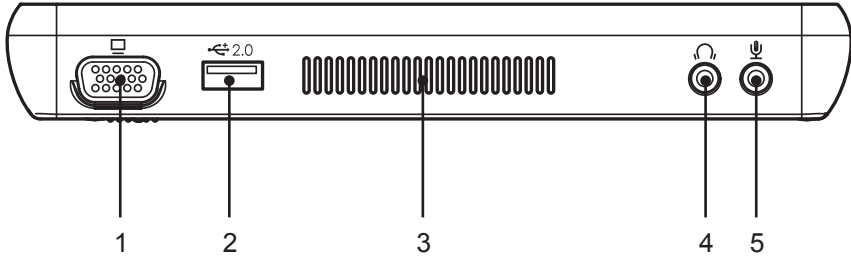


Figure 1.4 Right view

Component	Description
1	VGA port
2	USB port
3	Ventilation hole
4	Headphone jack
5	Microphone jack

Rear view

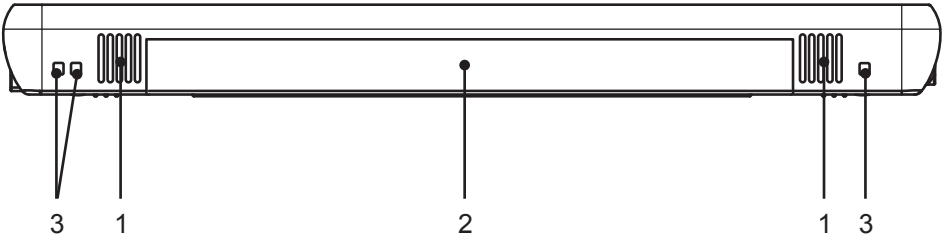



Figure 1.5 Rear view

Component	Description
1	Speaker
2	Battery pack
3	Charger pin: connect to a cradle for charging the battery.



Do not short-circuit the 3 charger pins. A short-circuit may cause damage to the machine and present risks for electric shock or fire.

IMPORTANT

Bottom view

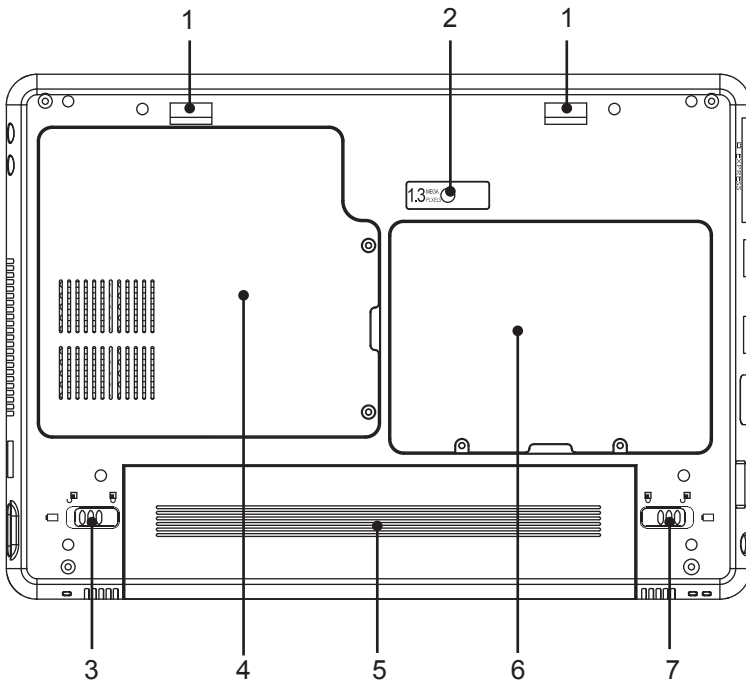
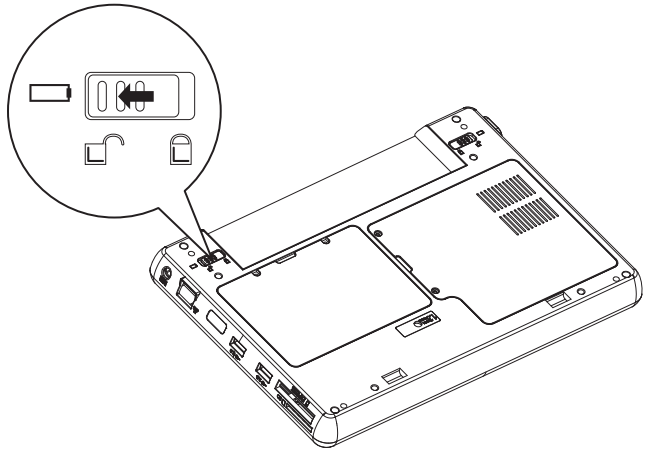


Figure 1.6 Bottom view

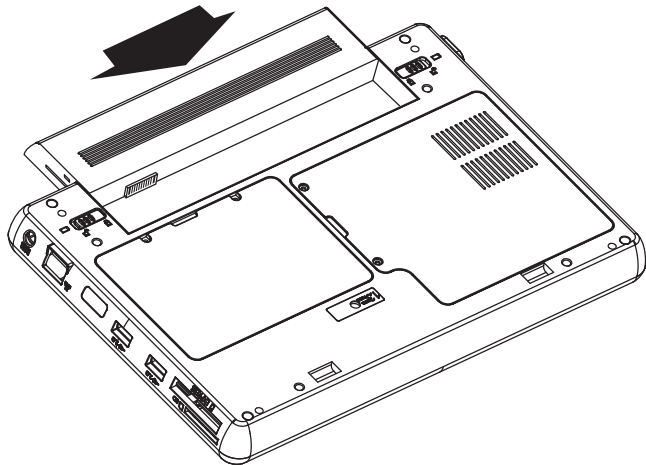
Component	Description
1	Mounting hole
2	Camera (optional)
3	Battery lock switch
4	Memory, WiFi module, Bluetooth module and 3.5G LAN module (optional) slots
5	Battery pack
6	HDD compartment
7	Battery release latch

Installing the battery pack

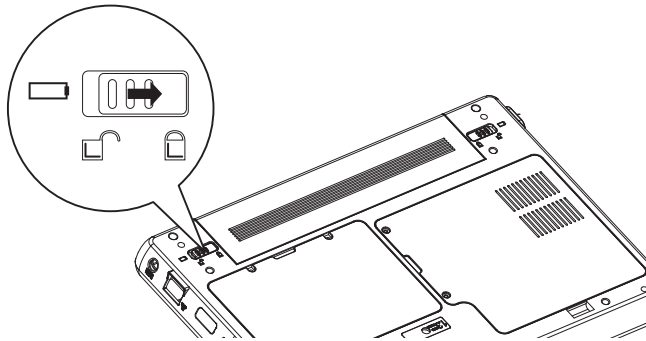
1. Overturn the EM200 so that the bottom is facing up toward you, as shown in the right. Slide the battery release latch to the unlock position.



2. Align EM200 battery compartment pins to the battery connector. Slightly slide and press the battery pack into the compartment until the battery lock switch is bounced back.

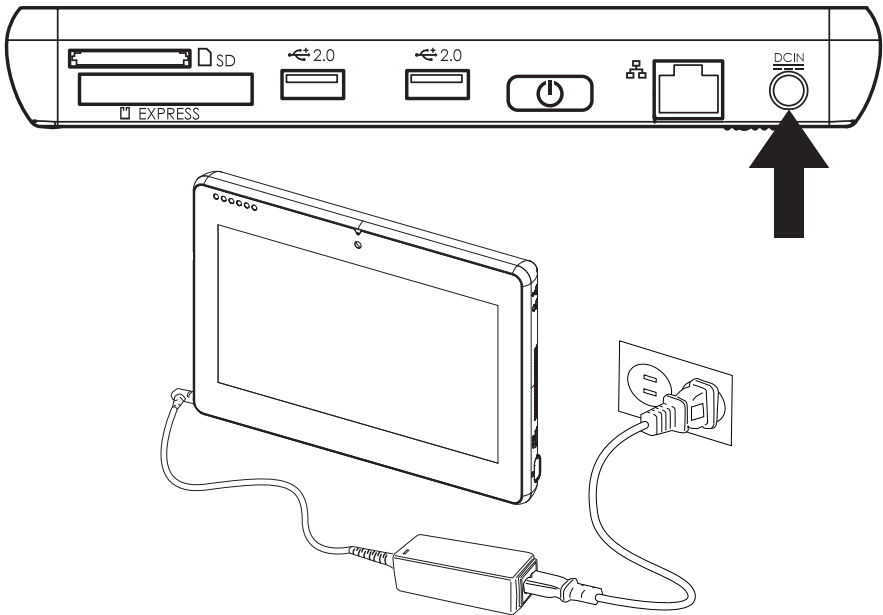


3. As shown in the right, slide the battery release latch to the lock position.



Charging the battery pack

Plug the AC adapter power cord into an electrical outlet, then connect the DC plug of the adapter cable to the EM-200. It takes approximately 2–4 hours to fully charge the battery for the first time. Subsequent charges might take longer.



NOTE

Charge the battery within a temperature range 0°C to 45°C.



IMPORTANT

To protect and prolong the life of the battery, do not charge it for 24 hours or longer at a time.



IMPORTANT

Please make sure to perform 3 complete full charge and discharge cycles to get optimal battery capacity. Failure to comply will result in shorter battery lifespan.

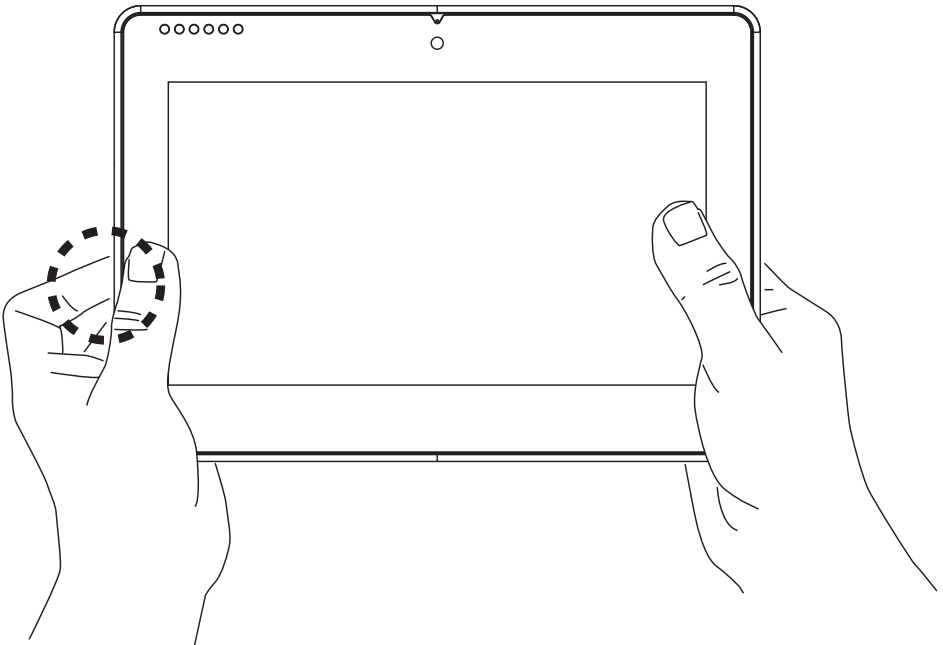
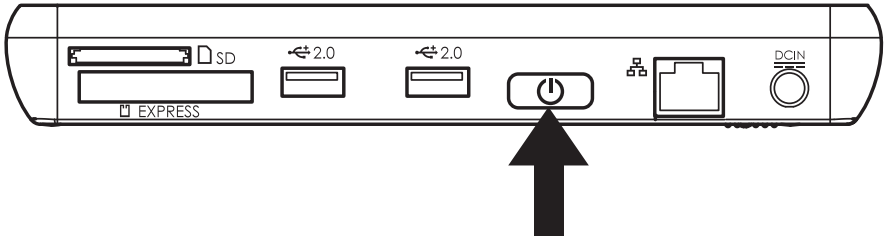


IMPORTANT

If battery is not used, please store in dry area within a temperature range of -10°C ~ 20°C. It is necessary to charge the battery once every 3 months to avoid battery degradation. Battery may become unusable if the above is not respected.

Powering on

The power button located on the left side of the EM200, press the power button the turn it on.



NOTE

To force power off , long press the power button for 4~5 seconds.

CHAPTER 2 BIOS SETUP

The primary function of the BIOS (Basic Input and Output System) is to identify and initiate component hardware. The BIOS parameters are stored in non-volatile BIOS memory (CMOS). CMOS contents don't get erased when the computer is turned off. The following topics are described in this chapter.

- About the Setup Utility on page 11
- Using the USB keyboard on page 11
- Main Menu on page 14
- Advanced Menu on page 15
- Security Menu on page 19
- Boot Menu on page 20
- Exit Menu on page 22

About the Setup Utility

The BIOS Setup Utility enables you to configure the following items:

- Hard drives, diskette drives, and peripherals
- Password protection from unauthorized use
- Power management features
- Boot device priority

This Setup Utility should be used for the following:

- When changing the system configuration
- When a configuration error is detected and you are prompted to make changes to the Setup Utility
- When making changes to the Power Management configuration
- When changing the User or Supervisor password
- When changing the boot priority

Using the USB keyboard

To enter the BIOS setup must use the external keyboard. Please connect USB keyboard and restart, then refer to the section "entering the Setup Utility".

Entering the Setup Utility

Press the F2 key during booting to access the BIOS Setup Utility:

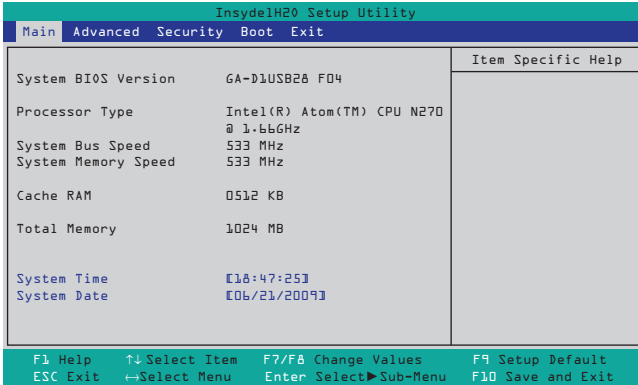


Figure 2.1 Main BIOS menu

BIOS Navigation Keys

The BIOS navigation keys are listed below.

Key	Function
←→	Select the menu titles
↑↓	Select the items
Esc	Exits the current menu
F1	Displays a screen that describes all key functions
F7/F8	Changes the selected field's values
F9	Loads the setup default values
F10	Saves the current configuration and exits Setup
Enter	Selects or enters submenu

Using BIOS

When you start the Setup Utility, the main menu appears. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ►) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

Main Menu

Press right/left arrow key to select the Main menu, which displays the following screen:

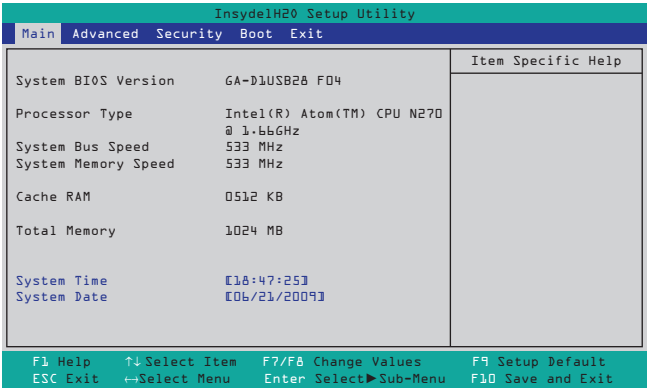


Figure 2.2 Main menu

System BIOS Version

This item shows the information about BIOS version.

Processor Type

This item shows the CPU type.

System Bus Speed

This item shows the FSB speed.

System Memory Speed

This item shows the memory clock speed.

Cache RAM

This item shows the size of the cache RAM.

Total Memory

This field displays the amount of memory detected by the system during boot.

System Time / Date

The Time and Date items show the current date and time held by the machine. These will be automatically updated whenever you make changes to the Windows Date and Time Properties utility.

Advanced Menu

Press right/left arrow key to select the Advanced menu, which displays the following screen:

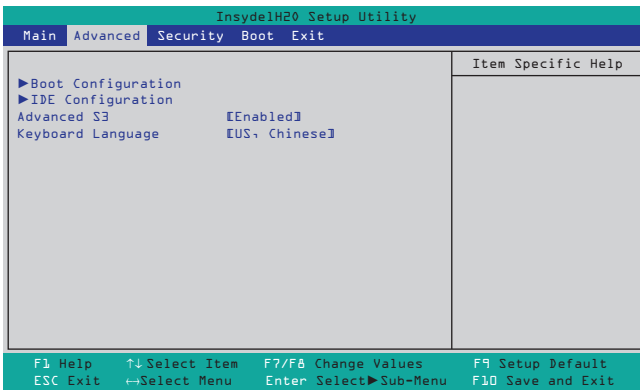


Figure 2.3 Advanced menu

Advanced S3

This item is used to enable/ disable the ACPI S3 mode, it can turn on and off the PC within seconds.

Keyboard Language

This item is used to select the keyboard language of external USB keyboard.

► Boot Configuration

Use this submenu to set the boot configuration. Select the item and press <Enter> to open the following menu:

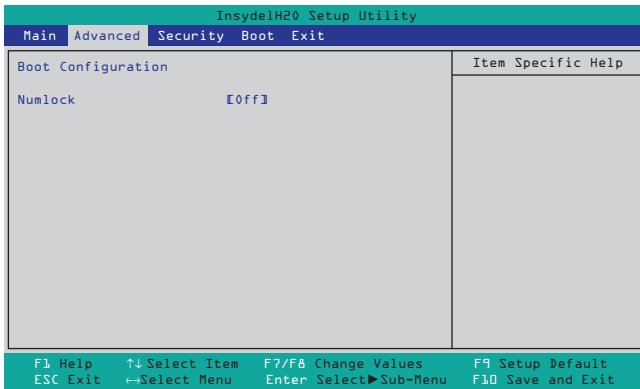


Figure 2.4 Boot Configuration submenu

Numlock

This item is used to turn on/off the numlock of the external keyboard at boot.

► IDE Configuration

Use this submenu to set the IDE configuration. Select the item and press <Enter> to open the following menu:

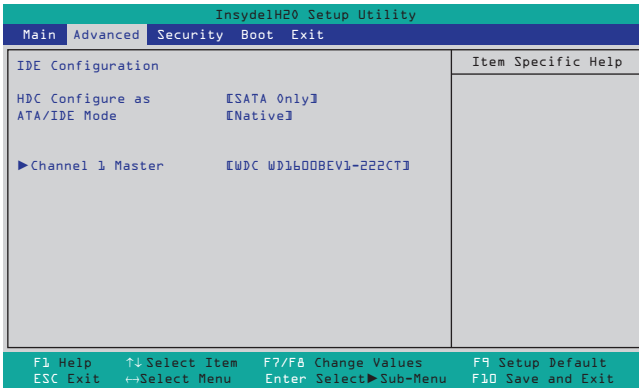


Figure 2.5 IDE Configuration submenu

HDC Configure as

This item is used to select the hard disk interface type.

ATA/IDE Mode

This item is used to select the ATA/IDE mode.

► Channel 1 Master

Use this submenu to set the hard disk drive, Select the item and press <Enter> to open the following menu:

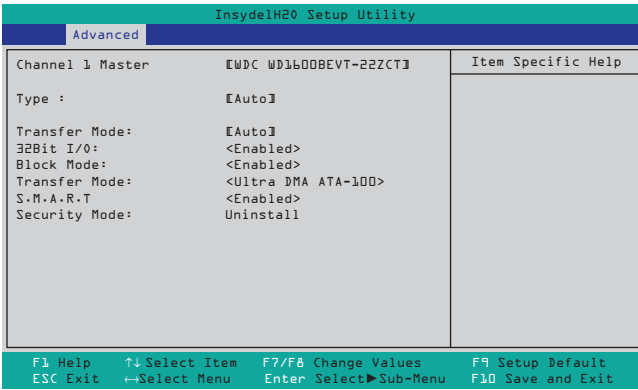


Figure 2.6 Channel 1 Master submenu

Channel 1 Master

Displays the name of the current hard disk device in channel 1 master.

Type:

If you leave this item at Auto, the system will automatically detect and configure the device in channel 1 master. If you change the value to User Defined and then manually configure the drive by entering the characteristics of the drive in the fields described below:

- 32Bit I/O – when enabled, allows the system to improve the hard drive performance for 32Bit OS.
- Block Mode – when enabled, allows the system to perform accesses to the hard disk in block mode.
- Transfer Mode – displays the data transfer mode.
- S.M.A.R.T – when enabled, allows the system to support S.M.A.R.T (Self-Monitoring, Analysis, and Reporting Technology) for hard disk device.
- Security Mode – displays the security mode status.

Security Menu

The security system allows you to set a password to prevent unauthorized access to BIOS. Press right/left arrow key to select the Security menu, which displays the following screen:

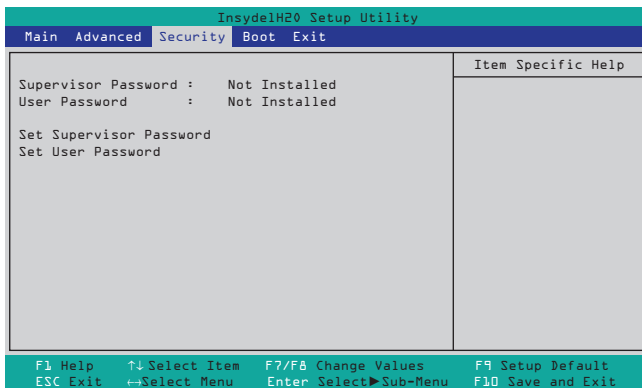


Figure 2.7 Security menu

Supervisor/ User Password

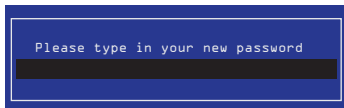
These two fields indicate if the Supervisor/ User Passwords are set or not.

Installed: System Password is set. Not Installed: System Password is not set.

Set Supervisor and User Passwords

These items can be used to install a password. A Supervisor password takes precedence over a User password, and the Supervisor can limit the activities of a User. To install a password, follow these steps:

1. Highlight the item Set Supervisor/User Password on the Security menu and press <Enter>.
2. The password dialog box appears.



3. If you are installing a new password, type in the password. You can type up to eight alphanumeric characters. Symbols are ignored. The Set Supervisor/User Password item differentiates between upper and lower case characters. Press <Enter> after you have typed in the password. To confirm the password, type the password again and press <Enter>. To clear the password, leave the dialog box blank, press <Enter>, when the confirm box appears, press <Enter> again.
4. Write the passwords down and keep them in a safe place.

Power on password

When enabled, system will ask input password on post time. When disabled, system will ask input password when go to Setup Utility.

User Access Level

This item allows you to configure the user access level.

View Only - users can only view the Bios settings and can not change the settings.

Limited - allows users to change some settings.

Full - users can change all of the BIOS settings.

Boot Menu

This menu allows the user to set the boot-related options. Press right/left arrow key to select the Boot menu, which displays the following screen:

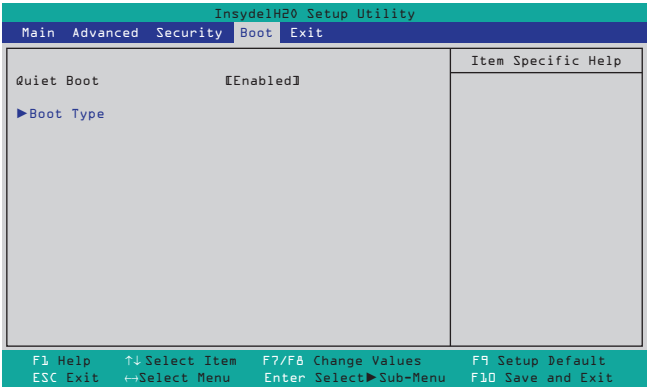


Figure 2.8 Boot Menu

Quiet Boot

When enabled, system will boot without message. In contrast, when disabled, system will boot in text mode.

► Boot Device Priority

Select the Boot Type item and press <Enter> to open the following menu:

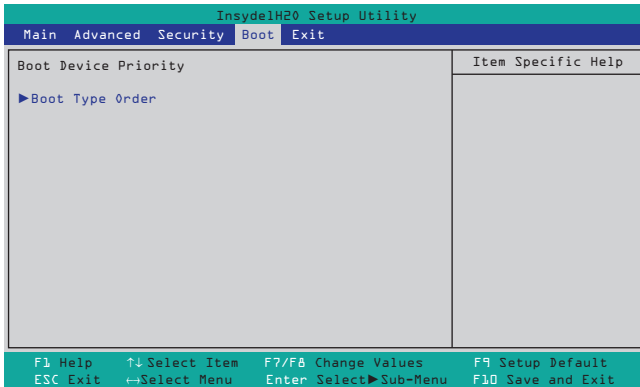


Figure 2.9 Boot Device Priority submenu

► Boot Type Order

This submenu allows the user to decide the order of boot devices to load the operating system. Select the Boot Type item and press <Enter> to open the following menu:

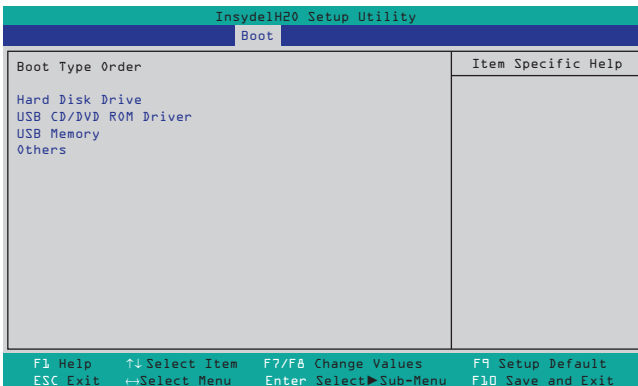


Figure 2.10 Boot Type Order submenu

Select a media type, and then use F7 or F8 key to move up or down the item in order to arrange the boot priority.

Exit Menu

This menu allows the user to save CMOS setting and exit the Setup Utility. Press right/left arrow key to select the Exit menu, which displays the following screen:

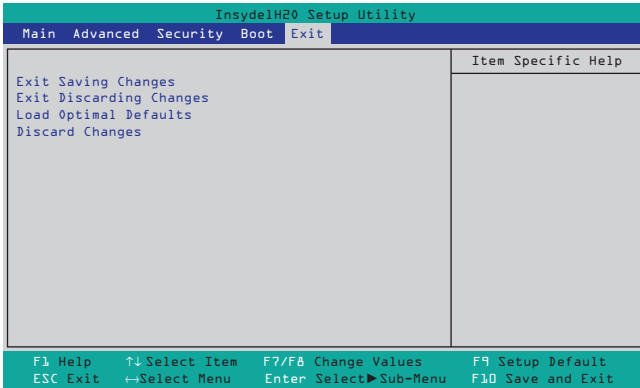
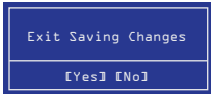


Figure 2.11 Exit Menu

Exit Saving Changes

Allows the user to save changes to CMOS and reboot the system. The following message is prompted when the user presses <Enter> on the item.



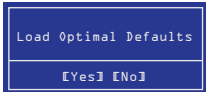
Exit Discarding Changes

Allows the user to exit Setup without saving changes to CMOS. The following message is prompted when user presses <Enter> on the item.



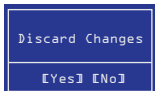
Load Optimal Defaults

Allows the user to load the default value in CMOS Setup. The following message is prompted when the user presses <Enter> on this item.



Discard Changes

Allows the user to discard the changes. The following message is prompted when the user presses <Enter> on this item.



CHAPTER 3 UPGRADING COMPONENTS

This chapter describes how to upgrade components for the EM-200. The following topics are described.

- Safety and precautions on page 23
- Before you begin on page 24
- Upgrading the hard drive on page 25
- Upgrading the memory module on page 27
- Upgrading the Mini-PCIE card on page 28

Safety and precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous. Follow these guidelines to avoid damage to the computer or injury to yourself.

- Always disconnect the unit from the power outlet.
- Leave all components inside the static-proof packaging that they ship with until they are ready for installation.
- After replacing optional devices, make sure all screws, springs, or other small parts are in place and are not left loose inside the case. Metallic parts or metal flakes can cause electrical shorts.



CAUTION

Only qualified personnel should perform repairs on the machine. Damage due to unauthorized servicing is not covered by the warranty. If you are not confident of installing a hard drive, memory card or LAN card, we recommend that you refer the job to qualified personnel.



WARNING

If the LCD breaks and fluid gets onto your hands or into your eyes, immediately wash with water and seek medical attention.



WARNING

The inverter card has high voltage. Do not touch the inverter card while power is connected to the machine. Unplug the power cord before attempting to replace any part.



CAUTION

To prevent static damage to components, wear a grounded wrist strap. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.



CAUTION

Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Do not flex or stress the circuit board. Do not hold components such as a processor by its pins; hold it by the edges.

Before you begin

Make sure you have a stable, clean working environment. Dust and dirt can get into components and may cause malfunction. Adequate lighting and proper tools can prevent you from accidentally damaging the internal components.

Most of the electrical and mechanical connections can be disconnected by using your fingers. It is recommended that you do not use needle-nosed pliers to disconnect connectors as these can damage the soft metal or plastic parts of the connectors.



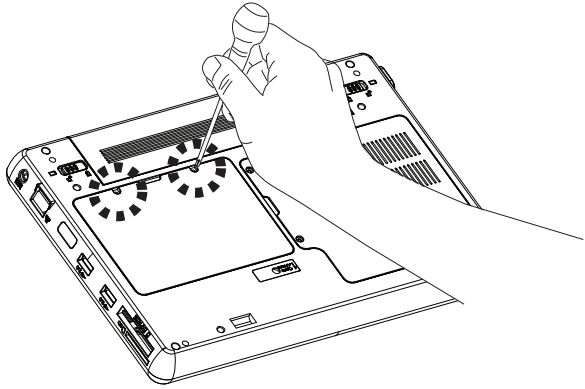
To prevent scratching the case of the machine, make sure the worktop surface is clean and flat.

CAUTION

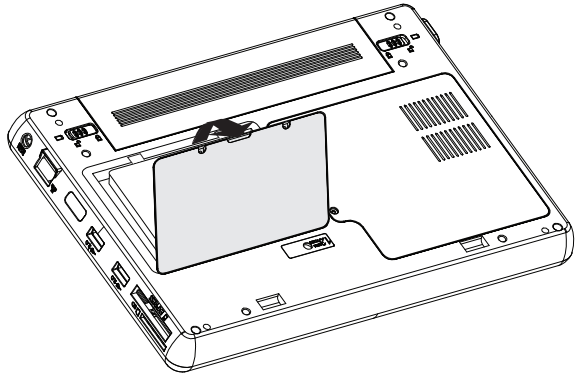
Upgrading the hard drive

Refer to the following to remove and replace the hard drive.

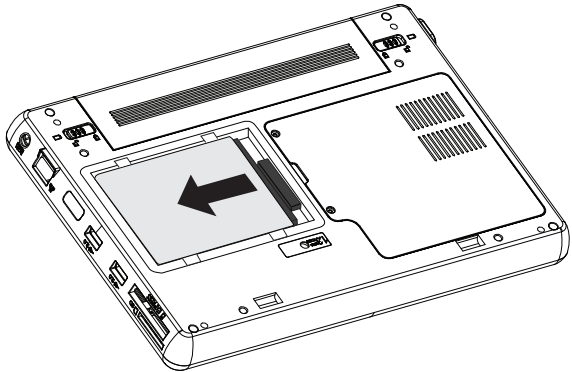
1. Turn off the EM-200.
2. Disconnect the AC adapter cable.
3. Overturn the EM200.
4. Remove the two screws as shown in the right.



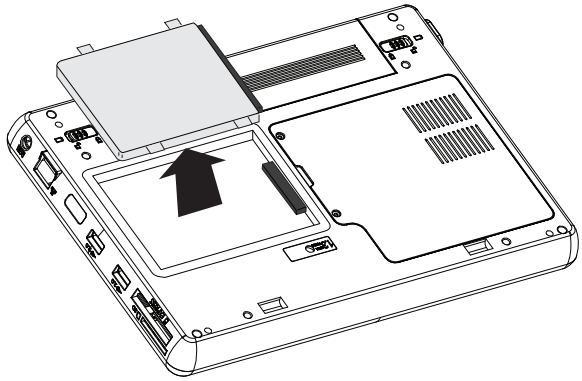
5. Open and remove the hard drive compartment cover.



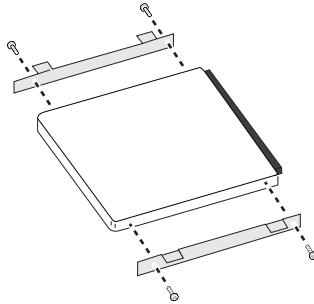
6. Slide the hard drive to disconnect.



7. Remove the hard drive.



8. Remove the four screws, then remove the hard drive out from the tray.

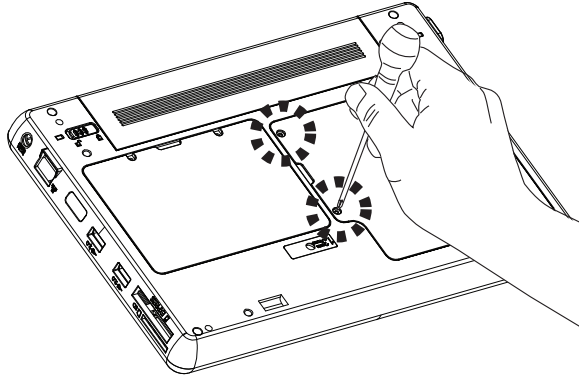


To replace the hard drive, reverse the above procedure.

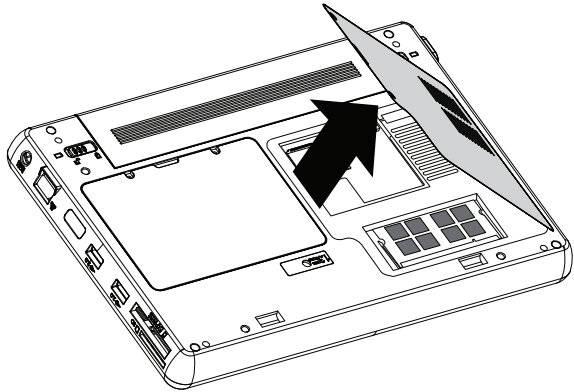
Upgrading the memory module

Refer to the following to remove and replace the memory.

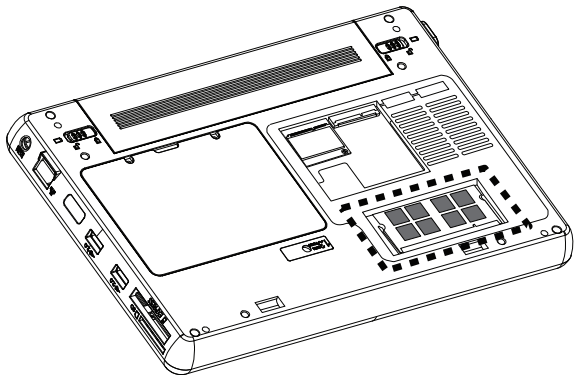
1. Turn off the EM-200.
2. Disconnect the AC adapter cable.
3. Overturn the EM200.
4. Remove the two screws as shown in the right.



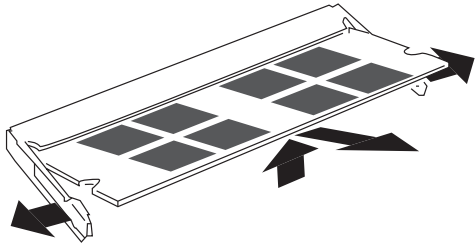
5. Open and remove the memory module compartment cover.



6. Locate the memory module, as shown in the right.



7. Pop out the two silver latches holding the memory module into place. The module pops up. Grasp the outer edges of the memory module with thumb and forefinger, and then gently remove it.

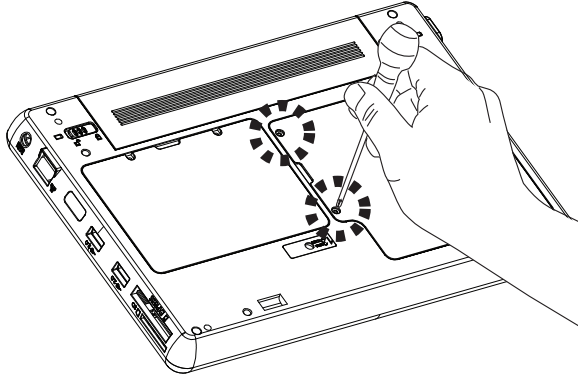


To replace the memory module, reverse the above procedure.

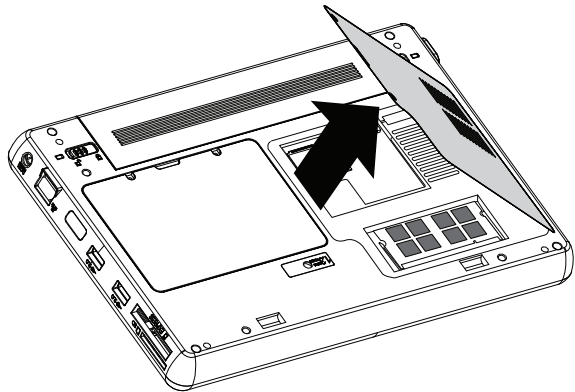
Upgrading the Mini-PCIE card

Refer to the following to remove and replace the PCIE card.

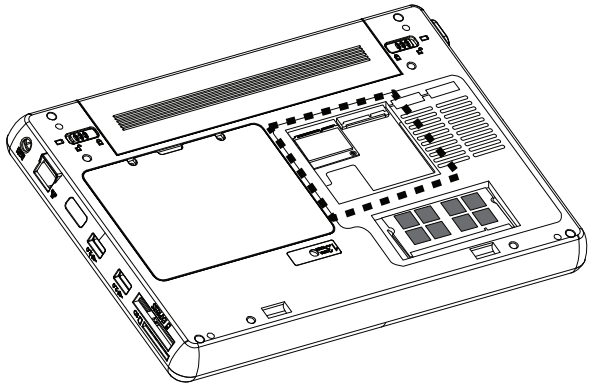
1. Turn off the EM-200.
2. Disconnect the AC adapter cable.
3. Overturn the EM200.
4. Remove the two screws as shown in the right.



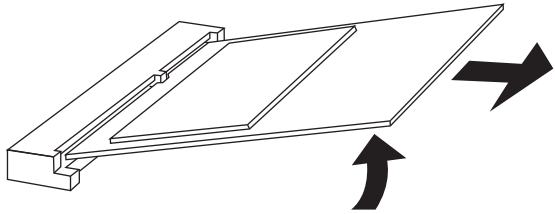
5. Open and remove the Mini-PCIE card compartment cover.



6. Locate the Mini-PCIE card, as shown in the right.



7. Remove the screw on the Mini-PCIE card, Mini-PCIE will pop up 45 degree.
8. When it pops up, gently remove it.



To replace the Mini-PCIE card, reverse the above procedure.

This appendix describes locating and solving problems that you may encounter while using the EM-200.

Troubleshooting

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection. Check the following before proceeding to the problem-specific solutions.

Tips for Troubleshooting

In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly. Try to pin point the problem and thus avoid replacing non-defective parts. For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.

Keep a record of the steps you take when troubleshooting: The information may be useful when calling for technical support or for passing on to service personnel.

- Use some other electrical device to confirm that the electrical outlet is working.
- Ensure all connections are securely attached.

General Problems

Refer to the following general problems you may encounter.

PROBLEM	SOLUTION
The display screen is dark.	Make sure that the EM-200 is not in suspend mode.
An incorrect date and time are displayed.	Set the date and time in BIOS or Operation System.
Cannot be turned off after crash.	Long press the power button for 4 seconds to force shutdown.
Cannot be powered on	Connect the AC adapter, if it can be powered on, there is insufficient battery power. If it still unable to be powered on after charging, please have the EM-200 serviced.

Having the EM-200 Serviced

If you are unable to solve the problem, you should have the terminal serviced. Pack the terminal in the original carton. (See “Unpacking the EM-200” on page 1.) Include a description of the problem and a checklist of the steps you took when trying to fix the problem. The information may be useful to the service personnel. Return the terminal to the place you purchased it.

Specification

Processor	Intel Atom 1.6GHz Processor (N270)
BIOS	1024K BB Flash ROM
Chipset	Intel 945GSE
Memory	Memory DDRII SO-DIMM X 1, 1GB, support up to 2GB
LCD Display	10.1" TFT-LCD, 1024x600, 200 nits, LED backlight
With Touch Panel	Resistive touch
Graphics	Integrated in Intel 945GSE graphics controller
Hard Disk Drive	One 2.5" 160GB SATA HDD
Bluetooth	Bluetooth 2.1
LAN & WiFi	Ethernet 10/100 Base T
	IEEE 802.11b/g/n
Interface I/O Port	5-in-1 Media Card Slot x 1
	Mini-PCIe Slot x 2 (Internal)
	Express Card 34 Slot x 1
	USB Port x 3
	Audio Jack x 2 (Mic-in and Headphone out)
	VGA D-Sub x 1
	DC-in x1
Speaker	1 Watt x 2
Input Devices	Touch panel
	Internal Mic-in
System Status LED	Power on/Suspend, Battery Charging, HDD Access, RF, Caps Lock, Number Lock
Buttons & Switch	Power on/off switch
WebCam	1.3M Pixel CMOS webcam integrated (optional)
Battery Pack	DC 7.4v, 4,500mA Li-polymer battery
Battery life	up to 3 hrs (estimate)
Dimensions (W x H x T)	189 x 268 x 25.7mm
Weight	1,250g